

PHOTOSEMICONDUCTOR MODULE AND ITS MANUFACTURE

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Abstract

PROBLEM TO BE SOLVED: To prevent an optical fiber from being broken and to obtain secure airtight sealing structure by forming a light input/output terminal of a ferrule which has an optical fiber inside, mounting the ferrule in a groove of a substrate, and leading its one end out of a package and joining the package and ferrule together in an airtight sealing state.

SOLUTION: The photosemiconductor module is constituted by joining the substrate 10 of silicon, etc., in the package 20 and covering it with a lid 27 for airtight sealing. The substrate 10 has the groove, an electrode, and a solder pattern 12 formed and a photosemiconductor element such as a laser diode 13 is mounted on the electrode. Further, an electrode pad 24 which forms an electric input/output terminal for inside/outside electric conduction is formed at a step part on the internal surface of the packet 20, and a ferrule 25 in which the optical fiber forming the light input/output terminal is embedded is joined to one flank. Then the ferrule 25 is mounted in the groove 11 of the substrate 10 and an electrode pad 24 on the side of the package 20 and the solder pattern 12 on the electrode on the side of the substrate 10 are joined together while matched with each other.



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